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ABSTRACT

This survey examined the test use practices of counselors who belong to either or both of two divisions of the American Association for Counseling and Development: the American School Counselors Association, and the Association for Measurement and Evaluation in Counseling and Development. A questionnaire covering test use patterns, test administration, selection and interpretation practices, and acquaintance with test use guidelines was completed by 672 counselors. Counselors adhered to many important test use guidelines. When selecting tests, most read test manuals or publisher's information. When administering tests, most explained the reason for giving the test, and how the results would be used. When interpreting tests, most of those surveyed said they seldom or never use a test in a way not specified in the manual. In interpreting test results, many reported reading the manual to find out the limitations of the test. However, many counselors reported no efforts to modify test administration procedures to allow for differences for minority and disabled individuals. Counselors' use of computer-generated test interpretations also raises some concerns. This is a relatively new aspect of test use and many counselors are uncertain about how to proceed. A final area of concern comes from the tendency of some counselors to use test scores alone in decision-making rather than seeking out other information to provide a more complete picture of the individual. (LLL)

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Predicting Counselors' Test Use Practices[1]

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Predicting Counselors' Test Use Practices

Because testing is an important part of the work of many counselors, nearly all counselor training programs require course work in measurement. For example, 98 percent of training programs for school counselors require one or more courses in measurement (Schafer and Lissitz, 1987).

However, it is unclear if this preparation is sufficient to ensure good test use practices. Lambert (1991) has asserted that there is a crisis in measurement literacy in psychology and education. She argues that courses in individual testing, program evaluation, or statistics are insufficient to provide a knowledge of psychometric theory necessary to select and use tests appropriately.

Professional organizations and other groups have been involved in a variety of efforts to help counselors become better informed about appropriate test use. For example, the American Association for Counseling and Development has a section on measurement and evaluation as part of its Ethical Standards (AACD, 1988); this organization has also produced materials to guide counselors in responsible test use (AACD/AMECD, 1989). The Joint Committee on Testing Practices, which has included representatives from AERA, APA, AACD, NCME and ASHA, has published the Code of Fair Testing Practices in Education (Joint Committee, 1988). The Test User Qualification Working Group has

developed a model of the knowledge, skills, and abilities needed to prevent test misuse (Eyde et al., 1988).

However, little is known about the extent to which counselors incorporate in their work the basic principles of good testing practice, whether learned in pre-service education, in-service training, or from reading these ethical standards and guidelines. This presentation reports the results from a survey of the test use practices of counselors who belong to either or both of two divisions of the American Association for Counseling and Development, the American School Counselors Association (ASCA) and the Association for Measurement and Evaluation in Counseling and Development (AMECD). The goals of the survey were: 1) to ascertain current test use practices among counselors, and 2) to explore the relationship between education, training, measurement knowledge and test use practices. A particular interest was determining if familiarity with test use guidelines is associated with good test use practices.

Methods.

A questionnaire covering test use patterns; test administration, selection, and interpretation practices; and acquaintance with test use guidelines was developed. The questionnaire was sent to a sample of 2,219 individuals, including all persons who were, as of June 1989, members both of ASCA and AMECD (N=334) and to a random sample of ASCA members (N=1192) and AMECD members (N=693). Individuals living outside of the United States and individuals who are students were excluded

from the sample. One month after the initial mailing, a follow-up postcard was sent to non-respondents. Seven hundred thirty nine questionnaires were returned (a 33 percent response rate). Six hundred seventy two usable responses are the basis of this analysis.

Because of the comparatively low response rate, an analysis comparing respondents and non-respondents was undertaken. Respondents were found to differ from non-respondents in race/ethnicity (a higher proportion of Whites than minority group members responded), gender (more males than females responded), work setting and job title (fewer individuals employed in schools and fewer counselors responded), and highest degree (more individuals with doctorates responded). Therefore, the data in this survey may not be representative of ASCA and AMECD members.

A descriptive analysis computed the percentage of respondents selecting the response and, also, the means and standard deviations for each questionnaire item. In addition two research questions were posed:

1) What counselor background, education, and work situation variables are associated with having read the Code of Fair Testing Practices in Education (Code) and/or the Responsibilities of Users of Standardized Tests (RUST)?

2) What counselor background, education, knowledge and work situation variables are associated with good test use practices?

Both questions were answered by use of ordinary least squares regression analysis. The regression to answer Question 1

is based on the responses of all subjects who have any type of test use responsibility. The analyses about good test use practices in test selection, test administration, and test interpretation are limited to subjects who have responsibilities in the particular area.

The conceptual models for these regressions are shown in Figures 1 and 2. As can be seen, it was hypothesized that counselors' background characteristics would be related to their education and training as well as to their work setting and job title. It was hypothesized that both education and work affect the test use roles of counselors. Education and training were believed to affect counselors' knowledge of basic measurement concepts and, also, whether or not the counselors have read test use guidelines. Education and training, work setting, knowledge of measurement concepts, and reading test use guidelines are expected to affect counselors' test use practices.

Results.

Descriptive Analysis. Nearly three quarters of the respondents work in an educational setting -- 29 percent in elementary or middle schools, 24 percent in high schools, and 21 percent in two-year or four-year colleges and universities. Nine percent of the respondents are in private counseling practice; in addition, twenty percent of those working in other settings have a private counseling practice in addition to their primary job. Slightly more than half the respondents (53 percent) give "counselor" as their job title; 13 percent of the respondents are

counselor educators, 6 percent are counseling administrators, 5 percent are counseling supervisors, 4 percent are research or measurement specialists, and the remainder hold a variety of other positions. In this paper, unless otherwise indicated, we use the term "counselor" to describe all respondents, not simply those who have the job title "counselor."

Nearly all of the respondents hold an advanced degree; 62 percent have a master's degree, 7 percent a specialist's degree, and 31 percent a doctorate. The most common degree fields are counseling and guidance, counseling, psychology, and educational psychology. Most respondents report taking one or more measurement-related courses, such as Tests and Measurement, General Statistics, Individual Appraisal, or Educational Research Methods, in the program for their highest degree. In addition, approximately half (51 percent) of these counselors have taken one or more in-service courses or workshops in testing or measurement since obtaining their highest degree.

The average age of the respondents is 47. Most of the respondents (95 percent) are White; 58 percent are females and 42 percent are males.

Test Use Patterns. The average respondent reports spending about six hours a week selecting, administering, and/or interpreting tests. Seventy three percent of the respondents say tests are very important or important in helping them carry out their work.

Overall, 62 percent of the respondents indicate they have some responsibility for test selection (30 percent select tests for a school or a school system and 32 percent select tests for use in their own counseling); 82 percent of the respondents indicate they have some responsibility for test administration and 91 percent say they had some responsibility for test interpretation.

Confidence in Ability to Use Tests and to Use Measurement Concepts. Sixty nine percent of the respondents say they are highly confident of their ability to use test results in counseling. The respondents are also highly confident of their ability to select tests (67 percent), administer tests (90 percent) and interpret tests (72 percent).

The respondents were asked to rate their confidence in their ability to understand and use important concepts in testing and measurement. Seventy two percent are highly confident of their ability to use test norms and standardized scores; 67 percent are highly confident of their ability to use statistics such as mean, standard deviation and correlation; 59 percent are highly confident of their ability to use test reliability and test validity information; and 58 percent are highly confident of their ability to use error of measurement information.

Test Selection. As indicated earlier, the respondents are less likely to have test selection responsibilities than to have responsibilities for test interpretation or test administration. For each test selection, administration, and interpretation

practice, the respondents were asked if this is something that they always or almost always do, do more than half of the time, do less than half of the time, or do seldom or never. Mean test selection responses are shown in Table 1. The test selection practices covered in the survey are all fairly commonly followed by the individuals who have responsibilities in this area.

Test Administration. Many counselors have responsibilities for test administration as well as for test selection. The test administration practices of the respondents are shown in Table 2. The most common test administration practice identified in this survey is explaining the reason for giving the test (89 percent of the respondents say they always or almost always do this). The least common test administration practice is altering administration procedures so people will feel more at ease taking the test (54 percent say they seldom or never do this).

The respondents were also asked if they use any computer-administered tests; 29 percent say they do so. Those individuals who use both computer-administered and paper-and-pencil tests were asked to indicate which test administration format they prefer. Sixty percent say they prefer paper-and-pencil tests while forty percent prefer computer-administered tests.

Test Interpretation. As noted earlier, counselors are more likely to have test interpretation responsibilities than responsibilities for test administration or test selection. Mean responses are shown in Table 3. The most common test interpretation practice among the respondents who have any test

interpretation responsibilities is reading the test manual to find out any limitations of the instrument (65 percent say they always or almost always do this). The least common test interpretation practice is using a test in a way not specified in the manual (84 percent say they seldom or never do this).

The respondents were also asked if they use computer-generated test interpretations; those who do so were asked the amount of confidence they have in these interpretations and the frequency with which they modify these interpretations. Sixty two percent of the respondents make some use of computer-generated test interpretations. Of these, 24 percent have high confidence in the interpretations and 69 percent have moderate confidence in them. Thirty two percent of the respondents who use computer-generated test interpretations say they seldom or never modify the computer-generated interpretation while an additional 25 percent say they modify them less than half the time.

Familiarity with Test Use Guidelines. Because counselors' test use practices may be affected by their knowledge of test use guidelines, the respondents were asked if they had read the Code of Fair Testing Practices in Education or the AACD/AMECD statement on Responsibilities of Users of Standardized Tests. Forty two percent of the respondents had read the Code and 52 percent had read the RUST statement; 59 percent had read one or both of these test use guidelines.

Relational Analysis. Regression analysis was used to answer Question 1 -- " What variables are most strongly associated with having read either or both of the test use guidelines (the Code of Fair Testing Practices in Education and/or Responsibilities of Users of Standardized Tests)?". The results are shown in Table 4.

The regression variables account for 17 percent of the variance in having read these test use guidelines. All else being equal, having read the Code and/or RUST guidelines is significantly associated with in-service tests and measurement training, confidence in knowledge of basic measurement concepts, having a job that involves test selection, and sex.

Finally the variables associated with good test use practices were examined to answer Question 2. Good test selection practice was defined as including all four test selection items (read reviews, examine specimen sets, read test manuals/publisher's information, and review test content). Good test administration practice was defined as explaining the reason for giving the test, explaining how test results will be used, modifying administration procedures to accommodate people with disabilities, and explaining how test takers can review their scores and ask questions about the results. Good test interpretation practice was defined as reading the manual to find out the limitations of the test, reading the technical section of the manual, taking into account any differences between test takers and the group on which the test was normed, and obtaining

additional information about test takers to support or refute test results. The regressions for good test selection, administration, and interpretation practices are shown in Tables 5, 6, and 7. The regression variables account for 12 percent of the variance in test selection practices, 6 percent of the variance in test administration practices, and 33 percent of the variance in test interpretation practices.

Good test selection practices are, all else being equal, significantly associated with in-service tests and measurement training, having read the Code of Fair Testing Practices and/or Responsibilities of Users of Standardized Tests, and work setting (See Table 5).

Good test administration practices are significantly associated with work setting, confidence in knowledge of measurement concepts, and reading the Code or the RUST statement (See Table 6).

Good test interpretation practices are associated with confidence in knowledge of basic measurement concepts, job title, in-service training in tests and measurement, reading the Code of Fair Testing Practices and/or the Responsibilities of Users of Standardized Tests, work setting, and degree (See Table 7).

While the regression results should not be interpreted as implying causality, they do show that good test use practices are consistently and significantly associated with counselors having read test use guidelines.

Discussion and Conclusions.

The survey results show that, in general, the counselors responding to this survey adhere to many important test use guidelines. When selecting tests, seventy two percent always or almost always read test manuals or publisher's information and the same proportion always or almost always examine specimen sets of possible tests, practices recommended for test users in the Code of Fair Testing Practices, A. 3 and A. 6. When administering tests, 89 percent always or almost always explain the reason for giving the test and 82 percent always or almost always explain how test results will be used, two very important parts of providing proper orientation before test administration (AACD/AMECD, Responsibilities of Users of Standardized Tests, V.1; AACD, Ethical Standards, C.8). When interpreting tests, 84 percent say they seldom or never use a test in a way not specified in the manual showing compliance with the AACD/AMECD guideline that "use of a test for a purpose for which it was not designed may constitute misuse. The nature of the validity evidence for a test depends upon its use." (Section V. B.) In interpreting test results, 65 percent always or almost always read the manual to find out the limitations of the test, since the AACD/AMECD statement on Responsibilities of Users of Standardized Tests says in Section VIII, Test Interpretation, "Proper interpretation requires knowledge about the test which can be obtained by studying its manual and other materials ... ;

no one should undertake the interpretation of scores on any test without such study."

However, in other areas there are some causes for concern. For example, AACD Ethical Standards say "The member must proceed with caution when attempting to evaluate the performance of minority group members or other persons who are not represented in the norm group on which the instrument was standardized." Yet 45 percent of the individuals responding to this survey say they do not routinely consider this and 12 percent say they seldom or never consider it. A second cause for concern is the report by 57 percent of the counselors responding to this survey that they do not routinely modify test administration procedures to accommodate people with disabilities; indeed, 24 percent say they seldom or never make such accommodations. However, Federal Regulations (Department of Health, Education and Welfare, 1977) require that test users assure themselves "that the tests are administered in such a way that the results reflect the abilities of handicapped people rather than the presence of the handicap."

Counselors' use of computer-generated test interpretations also raises some concerns. This is a relatively new aspect of test use and many counselors are uncertain about how to proceed. The 1988 revision of AACD's Ethical Standards recognized this and included helpful material. For example, the Standards now recognize "the possibility that computer technology may be misused by counselors who rely on computers to compensate for their lack of training and experience in test interpretation"

(Allen et al., 1988). However, 32 percent of the AACD members responding to this survey say they seldom or never change computer-generated test interpretations.

A final area of concern comes from the tendency of some counselors to use test scores alone in decision-making rather than seeking out other information to provide a more complete picture of the individual. As the AACD Ethical Standards point out, " Test results constitute only one of a variety of pertinent sources of information for personnel, guidance, and counseling decisions." Therefore, responsible test use requires that counselors "use all available evidence to infer the validity of an individual's score. A single test score should not be the sole basis for a placement or selection recommendation" (Responsibilities of Users of Standardized Tests, VII, A.1.b.). However, 44 percent of the AACD members responding to this survey indicated that they do not always or almost always obtain other information about individuals to support or refute test results. Over-reliance on test information can result in unfairness, as is discussed in the recent report of the National Commission on Testing and Public Policy (1990). This report points out that "when test results alone are used in selection, misclassification falls disproportionately on minority groups" and recommends that test scores not be used alone to make decisions about individuals, groups or institutions.

Moreover, these results may be a somewhat optimistic picture of test use. As noted earlier, the respondents are not

representative of the group sampled. Practicing counselors are under-represented and the respondents are more highly educated than the typical members of these two AACD divisions. In addition, the questionnaire results are self-report data that may have been affected by social desirability. For example, counselors may know that they should always explain the reason for giving the test and, therefore, answer that they always do so even though their actual test use practice is less ideal.

The regression analyses show how important it is for counselors to be familiar with test use guidelines. Good test use practices in all three areas are consistently and significantly associated with counselors having read the Code of Fair Testing Practices and/or the Responsibilities of Users of Standardized Tests.

The regressions also point out the importance of in-service training in tests and measurement for counselors. Counselors who have had such training are more likely to engage in good test selection and good test interpretation practices. Finally, the regressions emphasize the importance of counselors' understanding basic measurement concepts, such as error of measurement. Counselors who are confident of their measurement knowledge are more likely to use good test administration and test interpretation practices.

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Table 1

Test Selection Practices of Respondents

(n = 405)

Scale: 1 = Seldom or never, 2 = Less than half the time, 3 = More than half the time, 4 = Always or almost always

	Mean
Read the test manuals or publisher's information	3.64
Examine specimen sets of possible tests	3.59
Review the content of possible tests	3.58
Read reviews of possible tests	3.36

Table 2

Test Administration Practices of Respondents

(n= 547)

Scale: 1 = Seldom or never, 2 = Less than half the time, 3 = More than half the time, 4 = Always or almost always

	Mean
Explain the reason for giving the test	3.86
Explain how test results will be used	3.78
Explain to test takers how to review their scores and ask questions about results	3.18
Modify administration procedures to accommodate the physically handicapped	2.74
Explain the best strategies for taking a test	2.65
Provide practice materials before giving a test	2.55
Alter administration procedures so people will feel more at ease taking the test	1.86

Table 3

Test Interpretation Practices of Responding Counselors

(n= 597)

Scale: 1 = Seldom or never, 2 = Less than half the time,

3 = More than half the time, 4 = Always or almost always

	Mean
Read the manual to find out the limitations of the test	3.49
Obtain other information about individuals to support or refute test scores	3.20
Take into account differences between the individuals being tested and those on whom the test was normed	3.07
Read technical section of a test manual	3.01
Take into account individuals' familiarity with test content	2.80
Use different norms for males and females	2.75
Take into account individuals' test taking skills	2.75
Explain significance of different norm groups	2.71
Use different norms for different racial/ethnic groups	2.34
Disregard norms when testing people from foreign language backgrounds or other cultures	2.16
Compare test results by sex and race/ethnicity	1.98
Collect data to develop local norms	1.92
Set or use a passing or cut score	1.56
Use a test in a way not specified in the manual	1.21

Table 4

Variables Associated with Having Read
the Code of Fair Testing Practices in Education
and/or Responsibilities of Users of Standardized Tests

	Standardized Regression Wt.	t-Statistic
Sex (Male)	.11	2.55*
Degree (Doctorate)	.05	0.97
Work Setting (Education)	-.04	-1.03
Job Title (Counselor)	-.05	-1.13
Importance of Tests	.03	0.64
Select Tests	.11	2.31*
Administer Tests	.03	0.58
Interpret Tests	-.02	-0.43
Knowledge of T&M Concepts	.12	2.76**
In-Service T&M Course	.20	4.73***

$R^2 = .17$

* p = .05
** p = .01
*** p = .001

Table 5

Variables Associated with Good Test Selection Practices

	Standardized Regression Wt.	t-Statistic
Sex (Male)	-.00	-0.04
Degree (Doctorate)	.04	0.72
Work Setting (Education)	.11	2.20*
Job Title (Counselor)	-.07	-1.20
Importance of Tests	.06	1.22
Knowledge of T&M Concepts	.08	1.42
In-Service T&M	.17	3.22***
Have read Code/RUST	.14	2.58**

$R^2 = .12$

* p = .05
** p = .01
*** p = .001

Table 6

Variables Associated with Good Test Administration Practices

	Standardized Regression Wt.	t-Statistic
Sex (Male)	.01	0.19
Degree (Doctorate)	-.08	-1.47
Work Setting (Education)	.15	3.01**
Job Title (Counselor)	.02	0.29
Importance of Tests	-.09	-1.76
Knowledge of T&M Concepts	.15	2.85**
In-Service T&M	.01	0.10
Have read Code/RUST	.11	2.05*

R^2 = .06

* p = .05
** p = .01
*** p = .001

Table 7

Variables Associated with Good Test Interpretation Practices

	Standardized Regression Wt.	t-Statistic
Sex (Male)	-.08	-1.91
Degree (Doctorate)	.13	2.88**
Work Setting (Education)	-.11	-2.95**
Job Title (Counselor)	-.17	-3.94***
Importance of Tests	.08	2.12*
Knowledge of T&M Concepts	.23	5.54***
In-Service T&M	.13	3.38***
Have read Code/RUST	.13	3.23***

R^2 = .33

* p = .05
** p = .01
*** p = .001

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Figure 1
Conceptual Model - Variables Associated with Having Read Test Use Guidelines (Q1)

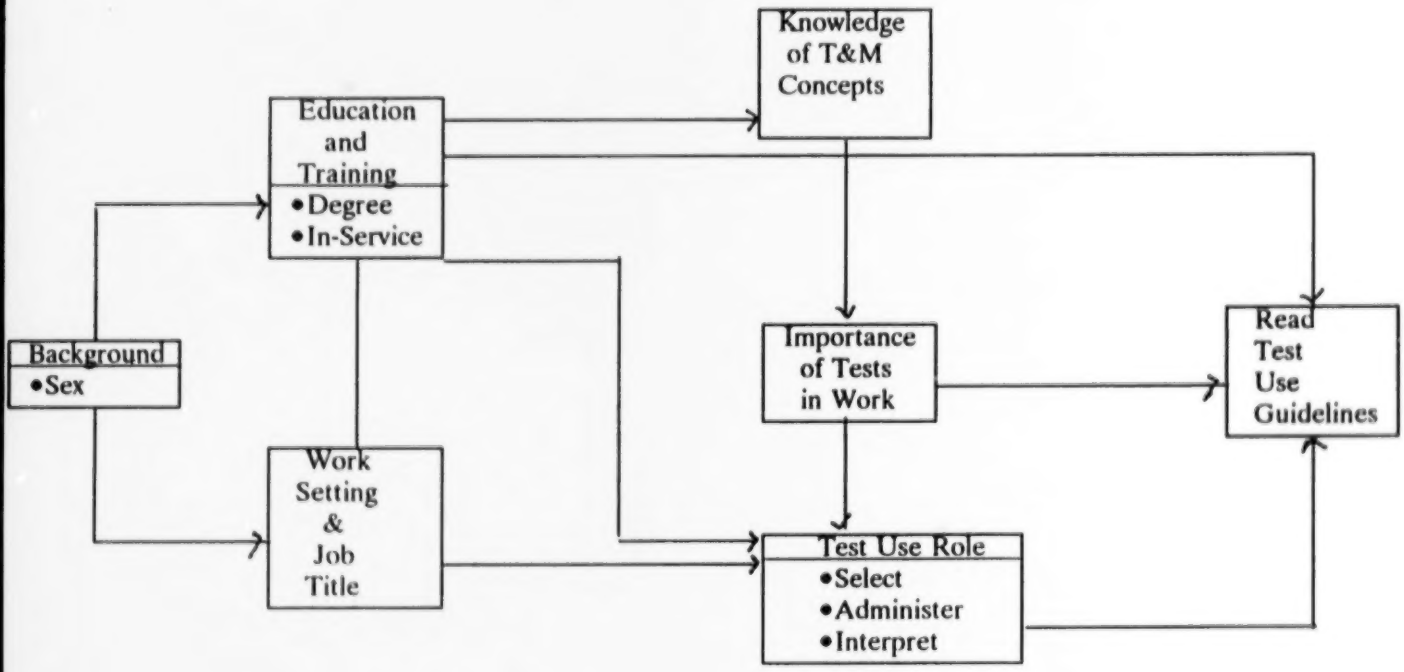

Figure 2

Conceptual Model - Variables Associated With Good Test Use Practices (Q2)